

Environmental Resources Management, Inc.

855 Springdale Drive • Exton, Pennsylvania 19341 • (215) 524-3500 • Telex 4900009249

134097 /

17 November 1989

Mr. Jack Kelly
USEPA-Region III
841 Chestnut Building
Philadelphia, PA 19107

FILE: 110-15

Dear Jack:

This letter summarizes some of the events which have taken place at the William Dick Lagoons Site over the past two weeks.

On 30 October 1989, MW-20 was completed to a total depth of 397 feet BLS. The bedrock below 180 feet (the bottom of the six-inch casing) appeared to be competent with the exception of a "soft zone" at approximately 184-185 feet BLS which was estimated to produce 6 gallons per minute. The remainder of the bore hole appeared to be competent and contained approximately eight measurable water producing zones, each appearing to give off a contaminated odor when encountered. The exception was a zone at approximately 335 to 337 feet BLS which did not appear to have the odor of contamination. The depth of contamination at this time is still unknown. The packer testing will however be used to verify this preliminary indirect evidence.

On the morning of 1 November 1989, ERM attempted to log MW-20 with bore hole geophysical equipment. It was learned that the logging tool when lowered down the well was unable to go beyond the 184 foot depth. The blockage was sounded with the tool and felt "mushy". Based upon this information and subsequent discussions with the ERM on-site geologist and the drillers it appeared as if the soft zone encountered at 184-185 feet BLS had contributed unconsolidated material to the borehole. It is unknown whether this material has completely filled the well to a depth of 397 feet or is bridged creating a plug in the well. Based upon our knowledge of the site's lithology and gentle dip of bedding, it appears that this material is entering the borehole from a steeply dipping weathered fault or fracture.

AR300908

I discussed this situation with you and Lisa Senior of the USGS the same day and reviewed several options to salvage the well. These options included:

- further development of the well for several hours to remove the sloughed material as well as to remove as much loose material from the fracture as possible.
- development of the well to remove the slough material and grouting of the fault/fracture.
- installation of a four-inch PVC sleeve, with multiple discrete interval screens set opposite the water producing zones encountered during the drilling.
- grouting of the existing well and installation of a new well.

On 8 November 1989 a conference call was held which included our selves and Mike Towle (filling in for Kathy Davies) and Bruce Hartmann. In our discussion we stated that we would attempt to grout the zone to stabilize it , then resume with the bore hole logging and packer testing. We have modified our grouting method to include the use of the straddle packer to better insure that the grout is indeed forced into the fracture rather than down through the slough material in the well. Mike Towle suggested that after the well was packer tested and the zone(s) of contamination determined, that a 4 four inch PVC screen be installed as an added insurance that the borehole remain open for the pump test. Based upon the results of the packer testing, we plan to install the appropriate screen arrangement to enable the well to be used for the pump test.

At that time, a tentative schedule was proposed (subject to driller availability). The concern was expressed by all parties that this additional effort was delaying the sampling of the wells and could encroach upon the completion schedule for the FS. Mike Towle suggested that the portable field GC be used to provide preliminary data for the FS engineers to use while the samples were being analyzed at the laboratory.

I have talked to the driller and they will not be able to do the grouting work until 16 November 1989. Based upon this new date I have revised the schedule for implementation as follows:

16 November

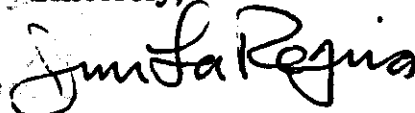
Well is grouted and allowed to sit over the weekend.

AR300909

20 November	The grout plug is drilled out and the well developed and logged.
21 November	The well is packer tested based upon the fracture spacing determined by the logging. Based upon the analytical results the well is fitted with a PVC sleeve.
23 November	Thanksgiving Holiday
27-28 November	The ground water samples are collected. The field GC is used to analyze the samples for in-house Feasibility Study use. A second set of samples is sent to the lab for analysis.
29-30 November	Step test conducted on MW-20
4-7 December	Pump test of MW-20.

As you can see, the field activities are scheduled back-to-back to expedite their completion. This is necessary so that the required data base can be assembled to support the EA and FS and meet the 1 February 1989 deadline. As has been shown in the past several weeks, it is evident that we are at the mercy of nature and the availability of the subcontractors to perform the work. We will continue to make every effort to complete the field work in an expeditious manner and advise you of the status of the project. If you have any questions do not hesitate to call.

Sincerely,



James LaRegina
Project Manager

JLR/

cc: B. Hartmann
R. Landon
J. Harrison

AR300910